The German economy

Macroeconomic situation

Growth in German economic output in Q3 2022 contrary to expectations

Contrary to expectations, German economic activity increased in the third quarter of 2022. Although high inflation and uncertainty about the future supply of energy weighed on the economy, real gross domestic product (GDP) grew by 0.3% on the quarter after seasonal adjustment according to the Federal Statistical Office's flash estimate,[1] thus exceeding its pre-pandemic level for the first time. The lifting of most coronavirus mitigation measures provided positive impetus in some services sectors. While households' reluctance to purchase owing to high inflation rates and uncertainty was felt in the retail sector, private consumption nonetheless rose markedly overall, thus proving more resilient than expected. Diminishing supply bottlenecks and a high order backlog supported production in the manufacturing sector. Investment in machinery and equipment was also bolstered by the easing of pressure along supply chains. Construction activity weakened against the backdrop of high construction prices, reduced purchasing power and higher financing costs.

Downward forces likely to clearly predominate in the winter half-year

High inflation and the tense situation in energy markets are likely to persist in the coming months. In addition, the weaker global economy is likely to spill over to the export-driven industrial sector. Catch-up effects in the consumer-related services sectors are dissipating. In addition, the higher government consumption in the past on account of the pandemic will probably gradually return to normal. In the winter half-year (October through March), the downward forces are therefore likely to predominate and economic output could decrease significantly.

1 Seasonal adjustment here and in the remainder of this text also includes adjustment for calendar variations, provided they can be verified and quantified.

Decline in exports of goods

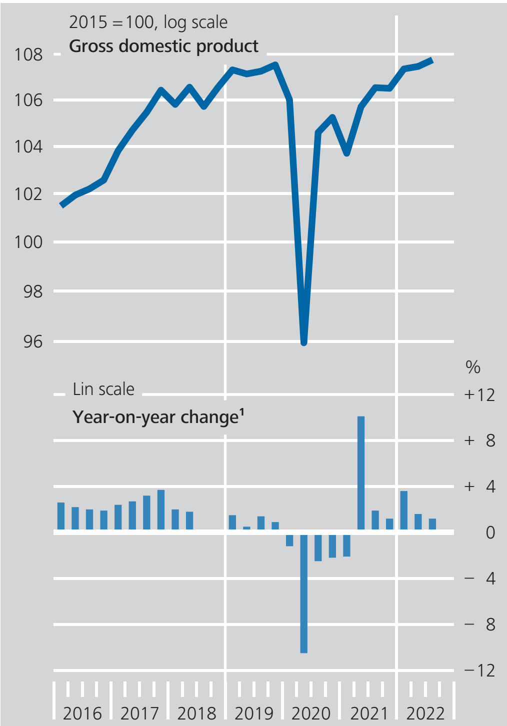
Price-adjusted exports of goods to both euro area and non-euro area countries declined significantly in the third quarter. Broken down by sector, price-adjusted exports of consumer goods were down and exports of intermediate goods remained unchanged but exports of capital goods increased again.

Commercial investment in machinery and equipment probably up significantly

Business investment in machinery and equipment is expected to have increased markedly in the third quarter and receding supply bottlenecks are likely to have supported investment activity. Furthermore, in the second quarter, investment in machinery and equipment was still lagging quite strongly behind its pre-pandemic levels. More capital goods were sourced from both within Germany and abroad. Manufacturers of capital goods thus experienced a sharp rise in domestic sales. In addition, significantly more capital goods were imported, with enter-

Aggregate output

Adjusted for price, seasonal and calendar effects



Source of unadjusted figures: Federal Statistical Office. **1** Price and calendar adjusted.

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Foreign trade

Seasonally and calendar adjusted, quarterly data

Source of unadjusted figures: Federal Statistical Office. **1** Adjusted using the price indices for foreign trade.
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prises also stepping up investment in their vehicle fleets. According to data provided by the German Association of the Automotive Industry (VDA), there was a substantial rise in motor vehicle registrations by commercial owners and registration figures for commercial vehicles.

Construction investment probably lower

Construction investment is likely to have fallen in the third quarter of 2022. This is indicated by construction output. High construction prices and supply-side bottlenecks, as well as reduced purchasing power and higher financing costs, dampened construction investment. According to data available up to August, revenue in the main construction sector rose but this is likely to be due to high price increases. Housing investment is expected to have fallen particularly sharply, whereas investment in commercial buildings increased somewhat. Investment in public buildings remained lacklustre.

Private consumption probably higher in Q3

Private consumption is likely to have risen markedly in the third quarter of 2022. Positive stimuli came from catch-up effects in areas previously restricted by coronavirus protective measures. Steep growth was posted in price-adjusted retail sales of textiles, clothing, footwear and leather goods, for example. Households also purchased more passenger cars, as indicated by the number of new motor vehicle registrations by private owners, which rose sharply according to the German Association of the Automotive Industry. The easing of supply bottlenecks could have played a role here, too. However, the effects of high inflation and uncertainty about energy supply also had an impact. Real retail sales (excluding motor vehicles) declined somewhat. Moreover, according to surveys by the market research institute GfK, consumer sentiment dropped to a record low and the propensity to save rose strongly.

Imports of goods down

Imports of goods fell markedly in real terms in the third quarter of 2022. While imports from the euro area increased distinctly, they declined significantly from non-euro area countries. The value of imports from China, the newly industrialised Asian countries and the OPEC countries contracted sharply. In particular, imports from Russia saw a steep decline. The fact that gas deliveries from Russia were initially cut back and then terminated altogether played a role here. Broken down by sector, price-adjusted imports of intermediate goods declined steeply, mainly due to falling chemical imports, which had risen exceptionally sharply in the first half of the year. By contrast, considerably more consumer and capital goods were imported.

Sectoral trends

High order backlog and alleviation of supply bottlenecks supported industrial output

Seasonally adjusted industrial output was up slightly in the third quarter of 2022 (+½%). This is probably partly due to the fact that supply bottlenecks eased somewhat, according to surveys by the ifo Institute, and the order backlog remained exceptionally high. By contrast, the temporary low water levels in Germany's inland waterways and the associated restrictions on the transport of goods are likely to have dampened industrial output in the third quarter. In addition, high energy costs weighed on output, especially in energy-intensive sectors. For example, there was a strong decline in the manufacture of chemical products, paper and paperboard, and other non-metallic mineral products. The production of intermediate goods fell significantly overall. The manufacture of consumer goods also dropped somewhat, whereas the production of capital goods rose steeply on a broad basis.

Construction activity weakened amid high construction prices, reduced purchasing power and raised interest rates

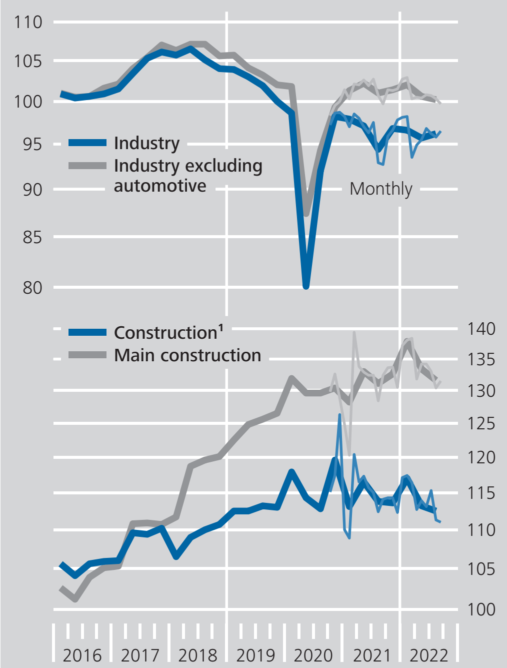
Seasonally adjusted construction output declined somewhat in the third quarter of 2022 (-½%). It decreased distinctly in the main construction sector, while remaining virtually unchanged in the finishing trades. High construction prices, reduced purchasing power and increased interest rates for building finance are dampening demand for construction work. Supply-side bottlenecks also continue to have a burdening effect. The percentage of enterprises in the main construction sector reporting disruption to their construction activity due to a lack of staff rose significantly in the third quarter, according to surveys by the ifo Institute. By contrast, equipment utilisation continued to decline.

Catch-up effects provided positive stimuli in the services sector

Economic output in the services sector is likely to have risen in the third quarter of 2022. Services production was up markedly compared with the second quarter according to data available up to August.[2] The lifting of coronavirus protective measures resulted in catch-up effects in sectors that had previously been restricted. Price-adjusted sales rose steeply in the accommodation sector but declined significantly in the catering sector. Furthermore, motor vehicle trade was buoyant as evidenced by the substantial increase in the passenger car registrations collected by the German Association of the Automotive Industry. An easing of supply bottlenecks is also likely to have provided some support here. Moreover, according to the data available up to August, wholesale trade recorded a major increase in real sales. By contrast, retail trade suffered from households' reluctance to spend, which was particularly noticeable in areas where catch-up effects were of no significance, such as retail sales of furniture and furnishings, household appliances and home improvement materials.

Output in industry and in construction

2015 = 100, seasonally and calendar adjusted, quarterly data, log scale



Source of unadjusted figures: Federal Statistical Office. **1** Main construction sector and finishing trades.

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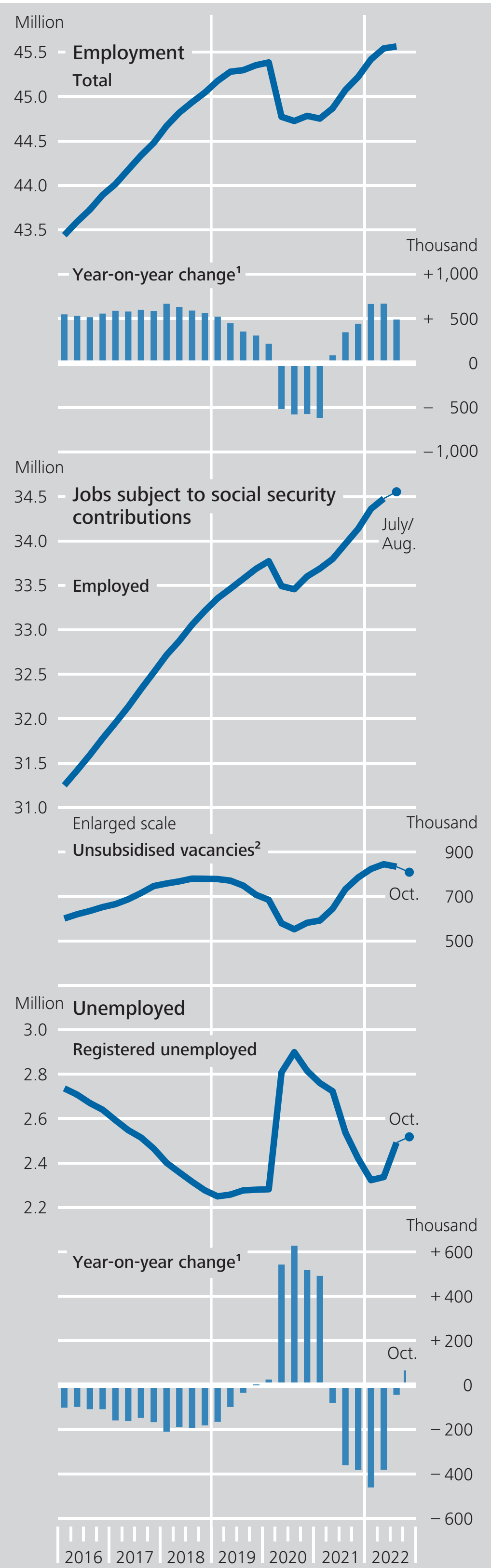
2 The production index for services comprises the sectors of transportation and storage, hotels and restaurants, information and communication, real estate activities, professional, scientific, and technical activities and the provision of administrative and support service activities.

Labour market

Seasonally adjusted, quarterly data



Sources of unadjusted figures: Federal Statistical Office and Federal Employment Agency. **1** Not seasonally adjusted. **2** Excluding seasonal jobs.

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Labour market

Labour market caught between labour shortages on the one hand and declining demand for labour on the other

In the third quarter, the labour market moved largely sideways in terms of both employment and unemployment. The previously very positive outlook deteriorated, however. At present, the labour market is caught between understaffing in many sectors, a high number of vacancies and long recruitment periods on the one hand, and declining demand for labour – especially in the areas hit especially hard by cost increases – on the other. This tight situation will therefore ease in the coming months, but the labour market is likely to remain broadly stable.

Employment growth came to a halt in Q3

The previously positive development in employment virtually came to a halt in the third quarter. Taking the average of the reporting quarter, seasonally adjusted total employment was only marginally higher than the level of the previous quarter. Employment subject to social security contributions and exclusively low-paid part-time employment nevertheless rose slightly, although it should be noted that current data is only available up to August. Self-employment continued to decline.

Growth in employment subject to social security contributions slower in almost all sectors

Stable employment developments are likely to mask a high degree of heterogeneity at firm level – depending on the impact of cost increases, the energy intensity of manufacturing and the respective sales partners. By contrast, employment subject to social security contributions remained largely stable even at the economic sector level. One exception was temporary agency employment, which is the first sector to make staff adjustments in times of crisis. In contrast to this, employment in the IT sector and in the hotel and restaurant sector even grew considerably towards the end of the period under review. The latter is likely to have seen a catch-up effect with the expiry of pandemic measures. Growth rates declined sharply in all other sectors but still remain slightly positive or neutral.

Ukrainian refugees contribute to rise in potential labour supply

The massive influx of immigrants over the course of the year raises the potential labour supply and thus mitigates the high degree of labour market tightness. Ukrainian refugees form the dominant group in terms of number. In October, there were 423,000 more Ukrainian citizens who are able to work signed up with employment agencies and job centres than in February, before the Russian attack on the country. For this group of persons, too, the granting of basic social security benefits is conditional on their willingness to work. However, many of them are unavailable, or only partially available, to the labour market because they look after children, attend educational establishments or participate in integration measures. In October, the Federal Employment Agency reported 189,000 more unemployed persons of Ukrainian nationality than eight months earlier.[3] However, a number of Ukrainian citizens have already found a job subject to social security contributions since February, with the number rising by 51,000 persons up to August 2022.

Unemployment up only marginally after adjustment for Ukrainian refugee effect

There were 2.52 million persons registered as unemployed with the Federal Employment Agency in October; the unemployment rate stood at 5.5%. Unemployment increased only marginally from August to October if factoring out the effect of the Ukrainian refugees on the statistics.[4] This also applies for October, despite the substantial increase in the general statutory minimum wage to €12 per hour. There are therefore no resultant significant negative effects on unemployment, at least in the short term.

Situation still very tight

The outlook for the labour market has deteriorated in recent months. Tightness – expressed by the ratio of the still very high level of vacancies to the low number of unemployed persons – is still very high despite a slight decline. In this respect, labour market tightness will probably ease further at first in the coming months, with the level of employment likely to be less affected.

Employment outlook drops into neutral territory

The number of vacant jobs subject to social security contributions reported to the Federal Employment Agency has declined slightly since the peak in May this year. The jobs on offer in the economy as a whole, as determined by the Institute for Employment Research (IAB) through a survey, fell only marginally in the third quarter compared with the record high in the second quarter. The time taken to fill a vacant post is currently longer than it has ever been in the past 30 years. This would normally be a sign of a pronounced shortage of skilled workers. However, some enterprises may also currently be hesitant to fill the vacancies they have advertised due to the uncertain economic outlook. In any case, the number of new vacancies added fell more sharply than the number of existing vacancies. The employment barometer of the ifo Institute, which conducts surveys of enterprises to chart the recruitment plans in trade and industry for the next three months, is down significantly, with the outlook dropping into neutral territory in October. The IAB's survey of developments in employment conducted among managers of the regional employment agencies is still in expansionary territory but the index has likewise declined.

Unemployment could see a moderate rise

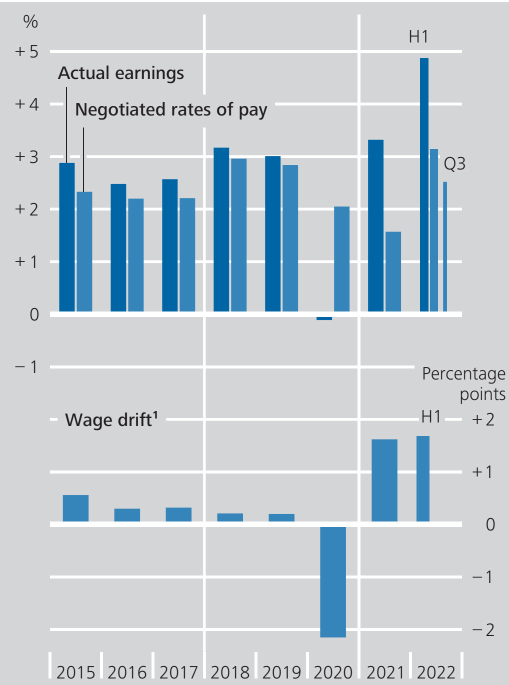
Short-time work has not played much of a role recently. As of July and in the wake of most pandemic restrictions being lifted, the maximum entitlement period for short-time working benefits was brought back down to 12 months. Some other special arrangements also ceased to apply. Nevertheless, the number of registrations for short-time work was markedly higher again in October. The IAB survey on un-

3 See Statistics provided by the Federal Employment Agency (2022), p. 13. However, the unemployment figures for Ukrainians entail a high degree of uncertainty as only a provisional analysis of labour market availability, in particular, was conducted in the first instance. Initially, the focus was on the granting of basic social security benefits.

4 As they have been included in the unemployment statistics since June, a comparison with the previous quarter is not very meaningful. For the past three months of August to October, the Federal Employment Agency reports a steady rise in seasonally adjusted unemployment – excluding any effect from the influx of Ukrainian citizens – of a total of 21,000 persons. See Statistics provided by the Federal Employment Agency (2022), p. 14.

Rates of pay and wage drift

Year-on-year change, on monthly basis



Sources: Federal Statistical Office (actual earnings) and Deutsche Bundesbank (negotiated rates of pay). **1** Wage drift is calculated as the annual change in the ratio of actual earnings to negotiated rates of pay.

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employment over the next three months is signalling a further moderate rise in unemployment. As the prospects of finding a new job remain comparatively good, it is, however, only frictional unemployment that is likely to increase.

Wages and prices

Negotiated wages continued to rise moderately in Q3, with actual earnings probably increasing more steeply

The third quarter of 2022 saw a continued moderate increase in negotiated wages. Including additional benefits, they were up by 2.5% on the year, compared with 1.9% in the quarter before. The higher rate was attributable in part to bonus payments, such as those in the metal-working and electrical engineering industries, that had been agreed in 2021. At 2.2%, year-on-year growth in basic pay adjusted for these bonus payments was only marginally higher in the third quarter than in the second. This is an after-effect of moderate wage agreements during the pandemic. Actual earnings are likely to have once again risen more strongly than negotiated wages in the third quarter. The main reason for this is probably the depressed average earnings level a year earlier – caused in particular by the number of people in short-time work, which was still relatively high at that time. In addition, anticipatory effects relating to the general statutory minimum wage, which was raised to €12 per hour on 1 October, may also have played a role.

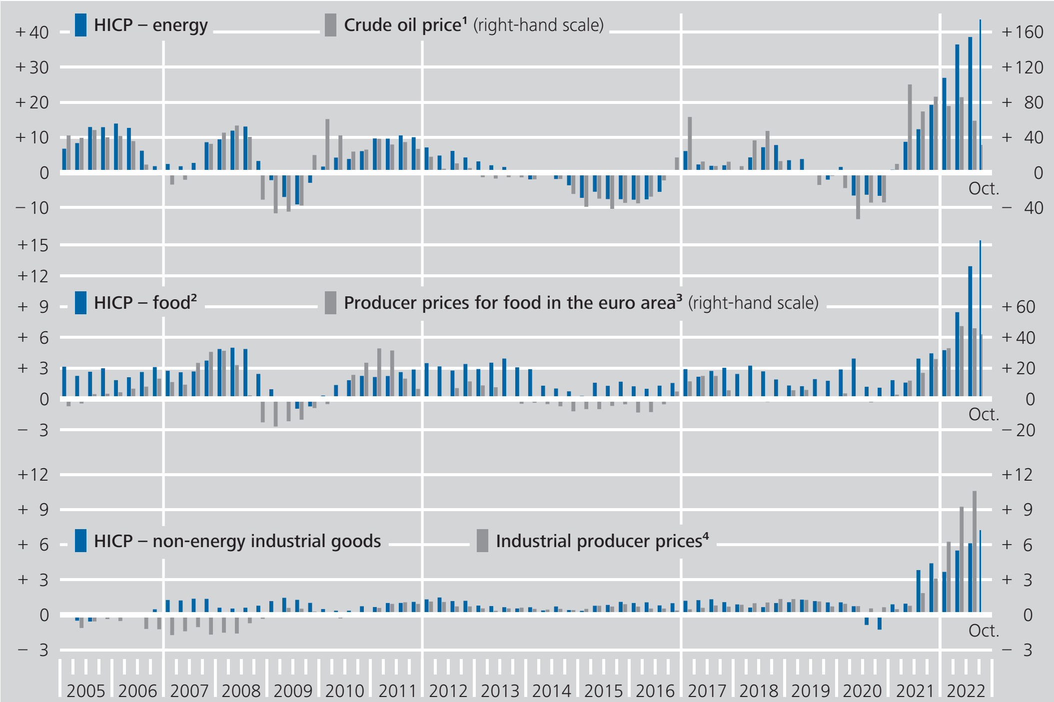
Recent wage agreements set out larger wage increases and are specially structured

A growing number of the wage agreements concluded in recent times have been strong. In particular, the annualised wage increases of 6% negotiated for the chemicals industry and 5¼% for the metal-working and electrical engineering industries are much higher than usual for those sectors. However, given that inflation rates are likely to remain high in the near term, the deal for the chemicals industry will probably nevertheless result in real gross wage losses. Looking at net wage growth, the situation is somewhat more positive from an employee perspective. This is due to the specific way in which the agreements are structured, combining an increase in scheduled rates of pay that is below expected inflation with two large one-off payments that are tax-free and exempt from social security contributions for employees. These “inflation compensation bonuses” make the deals more attractive for employees, as it means that the wage increases are markedly higher in net percentage terms than in gross percentage terms.[5] It is possible that enterprises, too, will find the combination of comparatively moderate permanent and temporary wage components to be more ap-

5 The Act on the Temporary Reduction of the Value Added Tax Rate on Gas Deliveries via the Natural Gas Network *(Gesetz zur temporären Senkung des Umsatzsteuersatzes auf Gaslieferungen über das Erdgasnetz)*, which was announced in the Federal Gazette on 25 October 2022, allows employers to grant their employees up to €3,000 tax-free and exempt from social security contributions as an additional payment at any time between 26 October 2022 and the end of December 2024 to compensate for high inflation. This relief measure, referred to as the inflation compensation bonus, can be paid out in a lump sum or alternatively in multiple instalments.

Price developments at economic stages as classified for HICP purposes

Year-on-year percentage change



1 Bundesbank calculations (in euro) based on daily prices in USD as quoted by Bloomberg Finance L.P. **2** Including beverages and tobacco products. **3** ECB calculations of DG AGRI prices based on the European Commission's farm gate and wholesale prices. **4** Analogous to HICP classification "non-energy industrial goods"; Bundesbank calculations based on data from the Federal Statistical Office.
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pealing than higher permanent wage increases. It is likely, then, that wage bargainers will generally express an interest in this sort of combination in future wage negotiations up to the end of 2024 – the time until which the inflation compensation bonus can be paid out. From a macroeconomic perspective, this will make it easier to return to lower wage growth after the temporary components expire. This could reduce the extent of second-round effects on inflation, especially in the medium term, and help prevent the current high inflation rates from becoming even more entrenched.

Trade unions' wage demands exceptionally high

The wage negotiations currently taking place are caught between high inflation and labour market shortages, on the one hand, and a looming recession and heightened uncertainty about future economic developments, on the other. As a net importer of energy, Germany is experiencing a loss of purchasing power and prosperity due to the rising energy prices, which are a major driver of the current high inflation rates. This is making it more difficult for trade unions to at least keep real wages steady. In view of high inflation, trade unions are calling for exceptionally high wage increases in the ongoing round of negotiations. For example, the trade union ver.di is demanding a 10.5% increase in wages for the public sector at the central and local government level for a period of 12 months. It is not expected that these demands will lead to actual wage settlements of the same magnitude. Although this does not suggest that wages are accelerating inflation, the risk of second-round effects has become greater. These would increase the risk of the euro area inflation rate remaining well above the medium-term target of 2% for a longer period of time.

Despite relief measures, exceptionally dynamic rise in consumer prices continued into Q3

In seasonally adjusted terms, the exceptionally strong rise in consumer prices (as measured by the Harmonised Index of Consumer Prices – HICP) continued into the third quarter. The already very large increases in food prices in the previous quarters intensified once again. The passing-on of higher agricultural producer prices appears to be far from the only reason for this. Higher costs in manufacturing and trade, such as those for energy, are probably also playing a role. Consumer energy prices also continued to rise markedly despite factors that brought relief. These include the elimination of the renewable energy levy (EEG levy), falling crude oil prices and the fuel rebate, which was time-limited to the end of August. However, the alleviating effect of lower oil prices was curbed by the continued depreciation of the euro. Other factors, such as higher transport costs for heating oil as a result of low water levels in Germany's inland waterways, also drove prices upwards. Lastly, consumer rates for gas were once again raised appreciably. In the case of non-energy industrial goods, consumer price dynamics remained robust in line with price increases at the earlier input stages. Prices for services rose just as sharply as they had in the second quarter, although the €9 ticket for local and regional public transport had a dampening effect until the end of August. Excluding rents and the volatile prices for travel, price growth for services even edged up again somewhat from an already high level. Wage increases are also likely to have contributed to this in some subsectors.

Inflation rate hit double digits for first time in September after temporary relief measures came to an end …

In June, annual HICP inflation had declined slightly to 8.2% on account of relief measures (the fuel rebate and €9 ticket) coming into force. Once the relief measures were no longer in place, inflation in Germany hit double digits (10.9%) in September for the first time since the early 1950s. On an average of the third quarter, the inflation rate rose from 8.3% to 9.4%. Excluding energy and food, it likewise went up slightly, to 3.8%, despite the dampening effect of the €9 ticket.

… and went up further in October

In October, prices again grew strongly on the month in seasonally adjusted terms, rising by 1.1%. Energy prices continued to rise markedly. Consumer rates for gas and electricity were raised perceptibly, although the reduction in VAT on gas – and district heating – that has been in place since this month has probably been passed on almost in full. Prices of food and non-energy industrial goods continued to go up strongly. The increase in the general statutory minimum wage is also likely to have played a role in the likewise significant rise in prices for services. Annual headline inflation climbed to 11.6%.[6] Core inflation reached 5.1%, up from 4.7%.

Possibly double-digit inflation rates in months to come, too

Double-digit inflation could persist into the new year as well. There is still strong cost pressure at the earlier input stages of the pricing chain, especially for non-energy industrial goods. Although market prices for crude oil and other energy sources were down recently, prices remain for the most part at very high levels; the pass-through of increased commodity prices to consumer rates for electricity and gas is still ongoing. The government paying gas bills in December, which represents the first stage of the gas price brake, will bring relief for consumers, but it is still unclear to what extent this will be reflected in the official price statistics and thus in the inflation rate. The second stage of the gas price brake, under which 80% of households' basic gas consumption from the previous year would be capped at a guaranteed 12 cent/kWh, could potentially dampen the inflation rate by almost 1 percentage point. Here, too, however, it is highly uncertain how this will be reflected in the official price statistics and how gas prices would develop in the absence of a gas price brake. This applies in equal measure to the electricity price brake envisaged for the start of 2023, which could temporarily further dampen the reported inflation rate. As soon as the gas and electricity price brakes expire, their impact on the inflation rate will reverse. In addition to easing the burden on consumers, a directly dampening effect of the brakes on inflation would also be desirable because, in the current period of record-high

6 In the consumer price index (CPI) calculated for national purposes, it was 10.4%, having increased from 10.0%.

inflation rates, there is a risk of longer-term inflation expectations being too closely guided by the latest inflation data.

Order books and outlook

German economic output likely to decline significantly in the winter half-year, …

Economic output is likely to decline significantly in the winter half-year (October through March). Uncertainty about the energy supply and its costs is weighing heavily on enterprises. According to the most recent autumn survey by the Association of German Chambers of Commerce and Industry, the majority of the firms surveyed perceive energy and commodity prices as a risk to business in the coming months. In surveys conducted by the ifo Institute, all sectors reported that the business situation and business expectations were worse in October than in the third quarter. Short-term production plans and export expectations in the manufacturing sector were predominantly pessimistic. The slowdown in global economic activity is likely to have an impact on exports, even though the extensive backlog of orders and receding supply bottlenecks in industry are somewhat mitigating the subdued demand. High inflation is also dampening private consumption and thus activity in the consumer-related services sectors. At the same time, the positive effects from the lifting of coronavirus mitigation measures are likely to diminish markedly. Furthermore, pandemic-related government final consumption expenditure is expected to taper off. This will bring government consumption down from its previously elevated level. Finally, construction activity is likely to continue to cool down.

… although scale of recession is extremely uncertain

Overall, this means that although economic activity was higher than anticipated in the third quarter, a recession is still to be expected in the German economy for the winter half-year. The scale of the recession is extremely uncertain, though. As things currently stand, a gas shortage can probably be avoided. But this hinges, amongst other things, on gas demand being sufficiently reduced – and in the case of house-

Demand for industrial goods and construction services

Volumes, 2015 = 100, seasonally and calendar adjusted, quarterly data

Source of unadjusted figures: Federal Statistical Office. **1** Only calendar adjusted.
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holds, in particular, this will be heavily dependent on winter temperatures. If there were a gas shortage, the decline in real GDP would be more pronounced. Should legislators follow the majority on the gas commission with respect to the gas price brake, it – as well as the proposed electricity price brake – will preserve price incentives to save energy (for more information, see the relevant comments on p. 60 and p. 70).

Industrial new orders down again, but order backlog remains high

There were further significant declines in industrial orders in the third quarter of 2022. This was due to a sharp drop in domestic demand. By contrast, the inflow of orders from outside Germany increased slightly. Broken down by sector, considerably fewer new orders were received by producers of consumer goods and intermediate goods. The inflow of orders fell sharply in the chemicals industry, in particular. New orders received by capital goods producers remained stable. While new orders for other transport equipment fell considerably, they rose steeply in the automotive sector. Despite dwindling demand, the order backlog in industry remains high. The reach of the order books in manufacturing even hit a new record high in October, according to ifo Institute surveys. In addition, the surveys indicate that the share of manufacturing firms whose output is being affected by supply bottlenecks continued to decrease. Both factors will probably continue to support industrial output in the coming months. However, data provided by the German Association of the Automotive Industry suggest that fewer passenger cars were produced in October.

Construction activity likely to continue to slow down

Construction activity is likely to continue to slow down. According to surveys conducted by the ifo Institute, sentiment in the main construction sector deteriorated significantly in October. High construction costs and elevated lending rates are increasingly pushing down demand for construction work. In July and August – the period up to which statistical data are available – the inflow of orders in the main construction sector decreased again somewhat on the second quarter. New orders were already down sharply in the second quarter. The number of building permits fell considerably in the third quarter. The reach of the order books, as measured by the ifo Institute, decreased further in October. In addition, labour and materials shortages are continuing to disrupt construction activity, even though the share of firms affected by these declined in the reporting period.

Private consumption likely to decline in the winter half-year

Household final consumption expenditure is likely to fall in the winter half-year. Catch-up effects in the wake of pandemic-related restrictions being lifted will dissipate, and potential catch-up effects will be offset by declining purchasing power and concerns about high energy costs. The consumer climate index calculated by the market research institute GfK stabilised at a very low level recently. In the consumer-related services sectors of retail and hotels and restaurants, ifo Institute surveys show that the assessment of the current situation by firms was significantly worse in October than in the third quarter. Business expectations became even more pessimistic. However, motor vehicle purchases could continue to provide a boost, as indicated by new vehicle registrations by private owners in October, which, according to data from the German Association of the Automotive Industry, were higher than in the third quarter.

List of references

Statistics provided by the Federal Employment Agency (2022), Berichte: Blickpunkt Arbeitsmarkt – Monatsbericht zum Arbeits- und Ausbildungsmarkt, Nuremberg, October 2022.